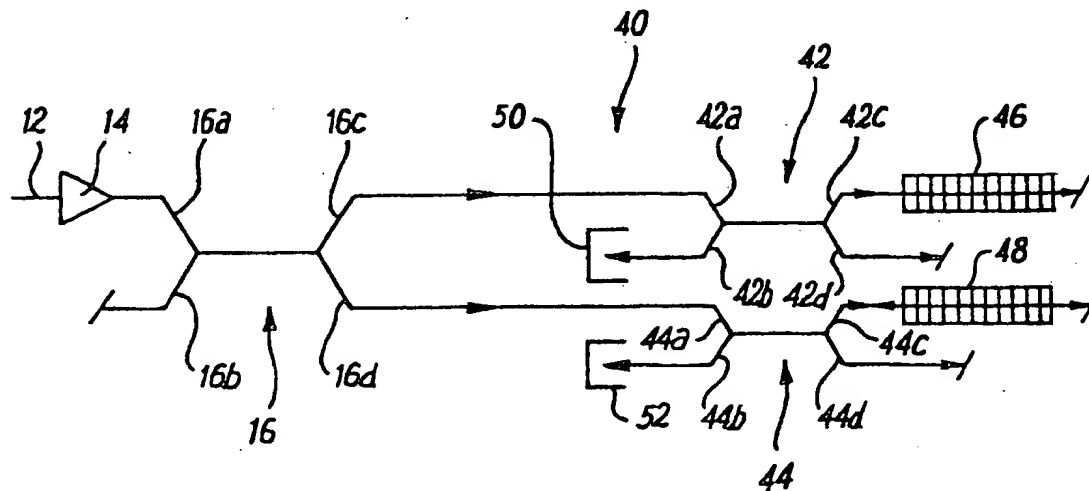


INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁷ : G01J	A2	(11) International Publication Number: WO 00/49376 (43) International Publication Date: 24 August 2000 (24.08.00)
<p>(21) International Application Number: PCT/GB00/00496</p> <p>(22) International Filing Date: 16 February 2000 (16.02.00)</p> <p>(30) Priority Data: 9903450.6 16 February 1999 (16.02.99) GB</p> <p>(71) Applicant (for all designated States except US): OXFORD FIBER OPTIC TOOLS LIMITED [GB/GB]; Aston Science Park, Love Lane, Birmingham B7 4BJ (GB).</p> <p>(72) Inventors; and (75) Inventors/Applicants (for US only): MURGATROYD, Ian, John [GB/GB]; Oxford Fiber Optic Tools Limited, Aston Science Park, Love Lane, Birmingham B7 4BJ (GB). SUGDEN, Catherine, Anne [GB/GB]; Oxford Fiber Optic Tools Limited, Aston Science Park, Love Lane, Birmingham B7 4BJ (GB).</p> <p>(74) Agent: SKINNER, Michael, Paul; Swindell & Pearson, 48 Friar Gate, Derby DE1 1GY (GB).</p>		<p>(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).</p> <p>Published Without international search report and to be republished upon receipt of that report.</p>

(54) Title: OPTICAL SPECTRUM ANALYSER



(57) Abstract

An optical spectrum analyser (10), receiving a multi-channel optical signal (12). The optical signal (12) is passed through an optical isolator (14) and a fibre coupler (16) to a tuneable optical filter. The tuneable optical filter comprises one or more fibre Bragg gratings (18) inscribed in a length of optical fibre. The optical fibre is mounted on a means operable to apply a variable strain to the fibre, to thereby tune the peak wavelength of the Bragg grating (18) over a desired wavelength range, the tuneable optical filter thereby reflecting each channel of the input signal (12) in turn. The detector (20) therefore detects a signal only if the input signal (12) contains wavelengths corresponding to the reflection wavelength of a grating (18).